HOKKAIDO UNIVERSITY

Title	A Revised List of the Species of Opisthobranchia from the Northern Part of Japan, with Some Additional Descriptions (With 6 Text-figures)
Author(s)	BABA, Kikutarô
Citation	北海道大學理學部紀要 = JOURNAL OF THE FACULTY OF SCIENCE HOKKAIDO UNIVERSITY Series Ⅴ Ⅰ. ZOOLOGY, 13(1-4): 8-14
Issue Date	1957-08
Doc URL	http://hdl.handle.net/2115/27193
Right	
Type	bulletin
Additional Information	

Instructions for use

Hokkaido University Collection of Scholarly and Academic Papers : HUSCAP

A Revised List of the Species of Opisthobranchia from the Northern Part of Japan, with Some Additional Descriptions

By

Kikutarô Baba

(Biological Laboratory, Osaka Gakugei University)

(With 6 Text-figures)

The following is a revised list of the Opisthobranchia of the northern part of Japan, based mainly upon the three previous papers by the author (Baba 1935a, '35b, '40). Subsequent informations offered by courtesy of some of my friends (Messrs. R. Chiba, F. Iwata, M. Yamada and M. Imajima ; Drs. T. Imai and the late S. Okuda), presented by the surveying ship "Sôyômaru", or obtained by myself in summer of 1956, have also been included in the list.

1. *Aglaia ezoensis* Baba, n. sp. Ezo-kisewata (n. n.)
*2. *Aplysia parvula* Mörch Kuroheri-amefurashi *Loc.*: Asamushi ; Otaru ; Shirikishinai.
*3. *Aplysia sibogae* Bergh Amakusa-amefurashi *Loc.*: Asamushi ; Akkeshi Bay.
*4. *Aplysia kurodai* (Baba) Amefurashi *Loc.*: Asamushi.
5. *Stiliger* (*Ercolania*) *akkeshiensis* Baba Ezo-tamamiru-umiushi (n. n.) *Loc.*: Daikokujima (Akkeshi Bay).
*6. *Pleurobranchaea novaezealandiae* Cheeseman Umifukurô *Loc.*: Hirota (Miyagi Pref.) ; Asamushi.
*7. *Gymnodoris citrina* (Bergh) Kinuhada-modoki *Loc.*: Asamushi.
8. *Triopha carpenteri* (Stearns) Hanasaki-umiushi (n. n.)
*9. *Plocamopherus tilesii* Bergh Hikari-umiushi *Loc.*: Asamushi.
10. *Lamellidoris* (*Lamellidoris*) *fusca* (O.F. Müller) Rameri-umiushi (n. n.)
11. *Acanthodoris pilosa* (Abildgaard) Toge-umiushi (n. n.)
12. *Acanthodoris uchidai* Baba Uchida-umiushi (n. n.) *Loc.*: Daikokujima (Akkeshi Bay).
*13. *Okenia* (*Okenia*) *distincta* Baba Mutsu-ibaraumiushi (n. n.) *Loc.* : Asamushi. *Dist.* : Tannowa (Osaka Bay).
*14. *Goniodoris glabra* Baba Koneko-umiushi *Loc.*: Asamushi ; Shirikishinai.
15. *Goniodoris* sp. *Loc.* : Asamushi.
16. *Trapania japonica* (Baba) Tsugaru-umiushi (n. n.) *Loc.*: Off Okidate (Mutsu Bay).
*17. *Okadaia elegans* Baba Okada-umiushi *Loc.*: Asamushi; Akkeshi and Daikokujima (Akkeshi Bay).
*18. *Glossodoris pallescens* (Bergh) Shiro-umiushi *Loc.*: Mutsu Bay.
*19. *Glossodoris aureopurpurea* (Collingwood) Komon-umiushi *Loc.*: Asamushi.
*20. *Glossodoris festiva* (Adams) Aoumiushi *Loc.*: Asamushi.

Jour. Fac. Sci. Hokkaido Univ. Ser. VI, Zool. 13, 1957 (Prof. T. Uchida Jubilee Volume).

21. *Cadlina* sp. *Loc.*: Asamushi.
*22. *Rostanga arbutus* (Angas) Iso-umiushi *Loc.*: Mutsu Bay; Osyoro; Shirikishinai; Muroran.
*23. *Aldisa sanguinea* (Cooper) Chishio-umiushi *Loc.*: Asamushi; Shirikishinai.
24. *Diaulula sandiegensis* (Cooper) Ezo-kasuriumiushi (n. n.)
*25. *Homoiodoris japonica* Bergh Yamato-umiushi *Loc.*: Asamushi; Shirikishinai.
*26. *Dendrodoris* (*Dendrodoris*) *nigra* (Stimpson) Kuroshitanashiumiushi *Loc.*A: samushi.
*27. *Armina* (*Armina*) *comta* (Bergh) Hime-tatejimaumiushi (n. n.) *Loc.*: Asamushi.
*28. *Armina* (*Armina*) *japonica* (Eliot) Tatejima-umiushi *Loc.*: Asamushi.
29. *Duvaucelia* (*Duvaucelia*) *exsulans* (Bergh) Hokuyô-umiushi (n. n.) *Loc.*: Off Esan, 170 fms; Off Kuji, 150 fms; Off Todozaki; Off Ojika Peninsula. *Dist.*: N. Pac. (Calif.; Vancouver I.; Sakhalin); Japan Sea (Off Niigata).
30. *Duvaucelia* (*Duvaucelia*) *undulata* O'Donoghue, var. *muroranica* Baba Shiro-hokuyô-umiushi (n. n.) *Loc.*: Muroran.
31. *Dendronotus frondosus* (Ascanius) Suginoha-umiushi *Loc.*: Off Muroran, 150 fms; Onagawa. *Dist.*: N. Atl.; N. Pac. (Vancouver I.; Bering).
32. *Dirona akkeshiensis* Baba, n. n. Akebono-umiushi (n. n.) *Loc.*: Akkeshi and Daikokujima (Akkeshi Bay).
33. *Coryphella athadona* Bergh Kozakura-minoumiushi (n. n.) *Loc.*: Asamushi; Shirikishinai; Akkeshi and Daikokujima (Akkeshi Bay).
*34. *Cratena bicolor* (Bergh) Futairo-minoumiushi *Loc.*: Asamushi.
35. *Cuthona osyoro* Baba Osyoro-minoumiushi (n. n.) *Loc.*: Osyoro.
36. *Cuthona* sp. *Loc.*: Off Inokama (Mutsu Bay); Akkeshi.
*37. *Hervia ceylonica* Farran Seiron-minoumiushi *Loc.*: Mourajima (Mutsu Bay); Shirikishinai.
*38. *Hervia emurai* Baba Emura-minoumiushi *Loc.*: Asamushi; Muroran. *Dist.*: Japan Sea (Niigata; Sado I.).
*39. *Facelinella quadrilineata* (Baba) Yotsusuji-minoumiushi *Loc.*: Onagawa; Urata (Mutsu Bay).
40. *Cerberilla asamusiensis* Baba Kasumi-minoumiushi (n. n.) *Loc.*: Asamushi.
41. *Aeolidia papillosa* (Linné) Oh-minoumiushi *Loc.*: Akkeshi and Daikokujima (Akkeshi Bay); Muroran; Shirikishinai; Osyoro; Asamushi. *Dist.*: N. Atl.; N. Pac. (Calif.; Vancouver I.; Shumagin Is.; Sakhalin).

The asterisks indicate the species occurring mainly in the warm water regions of Japan.

The influence of the cold current (Oyashio) carries the northern forms of Opisthobranchia to the east coast of Hokkaidô, or further to the north east coast of Tôhoku, Honsyû. Such are: *Lamellidoris fusca* (Hokkaidô; Tôhoku); *Acanthodoris pilosa* (Hokkaidô); *Aeolidia papillosa* (Hokkaidô; Asamushi); *Dendronotus frondosus* (Tôhoku); in the deep, *Duvaucelia exsulans* (Hokkaidô; Tôhoku). It is to be noted that the species *Triopha carpenteri* and *Diaulula sandiegensis* and the genus *Dirona*, all of these are originally known from the Pacific North America, have also been obtained from the cold current regions of our territory. *Coryphella athadona* appears to be one of the cold water forms, but it is endemic. In Mutsu Bay the southern fauna of Opisthobranchia is prevailing, and it is continued northwardly on the west and south coasts of Hokkaidô.

Aglaia ezoensis Baba, n. sp. (Fig. 3)

Very small, about 15 mm long, the form as usual and elongate-oval, the posterior lobes of the mantle-shield subequal in size. General ground-colour ashy yellow, but it is almost everywhere (excepting the foremost region of the head and the free posterior margin of the two shields) covered with small, irregular, blackish brown speckles. The sole as above. Without radula.

Loc.: Akkeshi (June 1951, 1 sp., coll. by Mr. F. Iwata).

Possibly this is a new species of the genus *Aglaia*, having a unique coloration of the body.

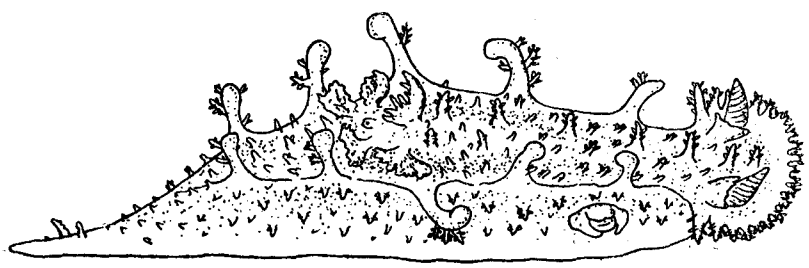


Fig. 1. *Triopha carpenteri* (Shirikishinai, May 5, 1954). Length 45 mm.

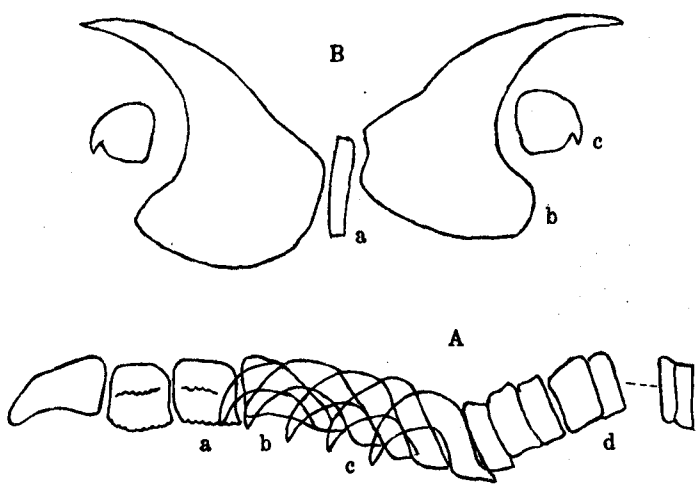


Fig. 2. A. *Triopha carpenteri* (the same specimen as before). A half-row of radula (×50). a-b, rachidian plates. c, inner laterals. d, outer laterals.
B. *Lamellidoris fusca* (Onagawa, May 27, 1936). A transverse row of radula (×100). a, rachidian plate. b, inner lateral. c, outer lateral.

***Triopha carpenteri* (Stearns)** (Fig. 1; Fig. 2 A)

Triopha-carpenteri MacFarland 1905, pp. 48-49.—Monterey Bay; MacFarland 1906, pp. 135-137, pl. 27, figs. 16-17, pl. 19, figs. 51-55, pl. 21, figs. 108, 113.—Monterey Bay to Point Lobes.

Referable to the above species in body-form, in radula and especially in colouring. Length of animal up to 50 mm. Velar papillae about 20–25, much divided. Similarly branching papillae scattered everywhere on back and sides, those between and behind rhinophores tending to form a median series. Dorso-lateral processes long claviform, mostly terminating in a rounded knob which is very similar to the apical light-organ of *Plocamopherus tilesii*. They are normally paired in specimen A, and 5 on either side. In specimen B these are 5 on the left and 6 on the right. Gills 5, tripinnate; oral tentacles lobiform. According to the coloured sketch taken by the collector, the whole animal is yellow, and somewhat darker above. The various papillae on back and sides, the frontal and the dorso-lateral appendages, the rhinophores and the tip of the gills vividly tinged with orange. Labial plates as usual formed of minute rods. The radula formulae in specimen A, 25×10–11·5–6·4·5–6·10–11; in specimen B, 28×10–12·7–8·4·7–8·10–12. Rachidian plates 4 (the inner quadrangular, the outer triangular). Inner laterals hamate, the outer laterals scale-like.

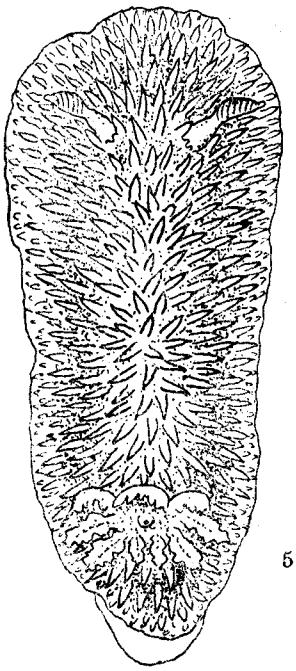
Loc: Shirikishinai near Hakodate (May 1954, 2 sps., coll. by Mr. M. Imajima). Also from Hirota, Miyagi Pref. (date ?, 1 sp., coll. by Mr. R. Chiba).

***Lamellidoris* (*Lamellidoris*) *fusca* (O. F. Müller)** (Fig. 2 B; Fig. 4)

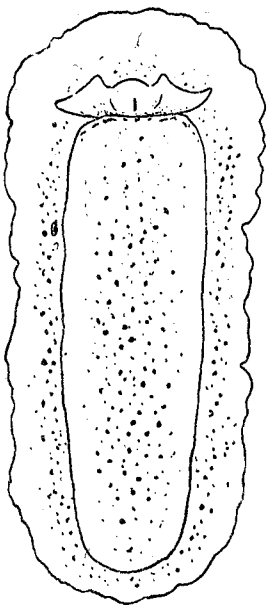
Lamellidoris bilamellata var. *pacifica* Bergh 1880, pp. 211-216, pl. 5, fig. 10, pl. 11, figs. 3-9.—Bering; Bergh 1894, pp. 192-193.—Unalashka.
Lamellidoris bilamellata O'Donoghue 1921, pp. 174-176.—Vancouver I.

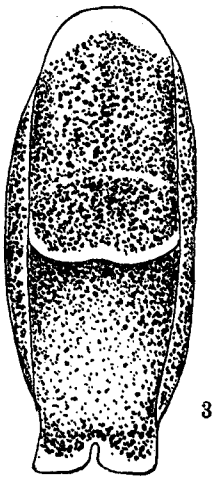
Animal small, about 10-25 mm in length, the back everywhere covered with rounded tubercles of varying sizes. Gills 23–25, simply pinnate, set in a circle. With a semicircular oral veil. Back ashy yellow in ground-colour with scattered chocolate brown flecks: in general these latter are arranged in three longitudinal bands down the centre of the back; the rhinophores and the gills chocolate, the underside of body uniformly ashy yellow. Rarely there occurs a whitish colour variety in which the chocolate markings are wanting altogether on back. No labial armatures. Radula formula 25–28×1·1·1·1·1. With a small rachidian plate. The inner lateral large, hamate; the outer lateral smaller, scale-like, with an apical claw-like hook.

Loc.: Akkeshi Bay in shallow water, attached on dead shells or on pebbles (Aug. 1956, several sps., coll. by Mr. F. Iwata and the author). Also from Shirikishinai (June 1954, 1 sp., coll. by Mr. M. Imajima) and from Onagawa (May 1936, 3 sps., coll. by Dr. T. Imai). *Dist.*: N. Atl.; N. Pac.

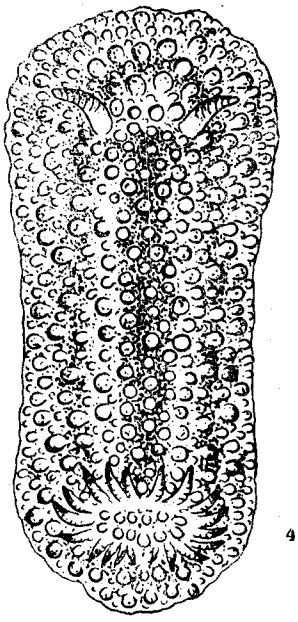


5

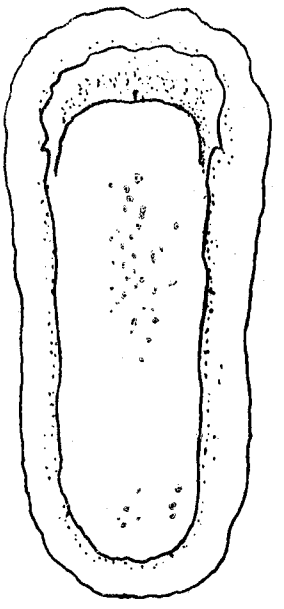


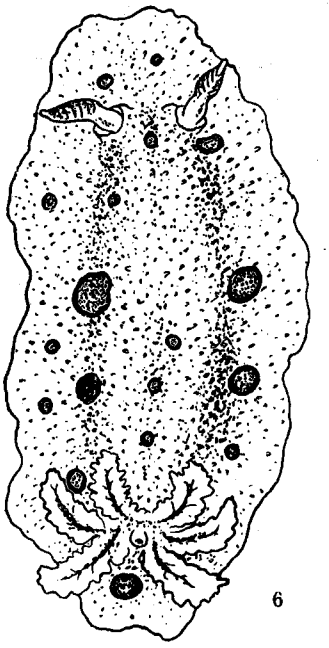


3



4





6

Acanthodoris pilosa **(Abildgaard)** (Fig. 5)

In this species the dorsal papillae are long conical and the gills (9, bipinnate) are non-retractile. General body-colour in life ashy white with chocolate brown shades on back. Rhinophores and gills also chocolate. The mantle below and the sole sparsely spotted with chocolate. A whitish colour variety is present.

Loc. : Akkeshi Bay, dredged up with *L. fusca* (Aug. 1956, 5 sps., coll. by Mr. F. Iwata and the author). Occurs also in Muroran and in Shirikishinai. *Dist.* : N. Atl. ; N. Pac. (Vancouver I. ; Kyska).

Diaulula sandiegensis **(Cooper)** (Fig. 6)

Diaulula sandiegensis MacFarland 1905, pp. 41-42.— Monterey Bay; MacFarland 1906, pp. 122-123, pl. 23, fig. 5, pl. 18, figs. 22-24.— Monterey Bay; O'Donoghue 1921, pp. 159-161.—Vancouver I.

The animal previously referred to *Peltodoris mauritiana* has been re-identified with the above species. The newly captured specimen is about 40 mm in length. Body soft, the back very finely villous; the gills 6, tri- or quadripinnate; the oral tentacles digitiform. General ground-colour ashy yellow, the back with scattered chocolate-brown, typically ring-shaped markings. These are varying in sizes, and the largest tend to be arranged in a longitudinal series on either side of the median line. Underside without markings. Rhinophores yellow, gills whitish.

Loc. : Akkeshi, on shore (Aug. 1956, 1 sp., coll. by the author). Occurring also in Muroran, Shirikishinai, Asamushi and in Onagawa.

Dirona akkeshiensis **Baba, n. n.**

The name *D. albolineata* of Baba 1935b has been altered as above. The animal from Akkeshi is uniformly pinkish, and has no edging white lines which characterize *D. albolineata* MacFarland. In general colouring the animal in question is somewhat akin to *D. picta* MacFarland, but it is separable from the latter by virtue of having no tubercles on the dorsal papillae. The animal grows up to 60 mm in length.

Fig. 3. *Aglaia ezoensis* (Akkeshi, June 9, 1951). Mr. Iwata del. Length 15 mm.

Fig. 4. *Lamellidoris fusca* (Akkeshi, Aug. 3, 1956). Dorsal and ventral views. Length 25 mm.

Fig. 5. *Acanthodoris pilosa* (Akkeshi, Aug. 8, 1956). Dorsal and ventral views. Length 12 mm.

Fig. 6. *Diaulula sandiegensis* (Akkeshi, Aug. 6, 1956). Length 40 mm.

References

Baba, K. 1935a. Report of the biological survey of Mutsu Bay. (27). Nudibranchia of Mutsu Bay. Sci. Rep. Tôhoku Imp. Univ. Ser. 4, Biol. 10 (2).

———— 1935b. The fauna of Akkeshi Bay. I. Opisthobranchia. Jour. Fac. Sci. Hokkaido Imp. Univ. Ser. 6, Zool. 4 (3).

———— 1940. Some additions to the nudibranch fauna of the northern part of Japan. Bull. Biogeogr. Soc. Japan, 10 (6).

Bergh, R. 1880. On the nudibranchiate gastropod Mollusca of the North Pacific Ocean, with special reference to those of Alaska, pt. 2. Proc. Acad. Nat. Sci. Philadelphia.

———— 1894. Report on the dredging operations of the "Albatross". XIII. Die Opisthobranchien. Bull. Mus. Comp. Zool. Harvard Coll. 25 (10).

MacFarland, F. M. 1905. A preliminary account of the Dorididae of Monterey Bay, California. Proc. Biol. Soc. Washington 18.

———— 1906. Opisthobranchiate Mollusca from Monterey Bay, California, and vicinity. Bull. Bur. Fish. Washington 25.

O'Donoghue, C. H. 1921. Nudibranchiate Mollusca from the Vancouver Island Region. Trans. Roy. Canad. Inst. 13 (1).